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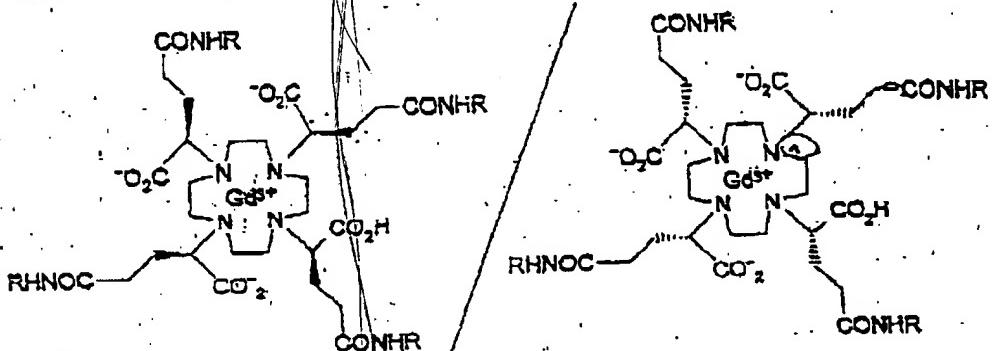
Amended set

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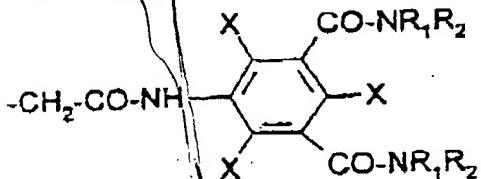
Claims

1. Contrast agent for medical imaging, characterized in that it comprises a racemic compound of formula A



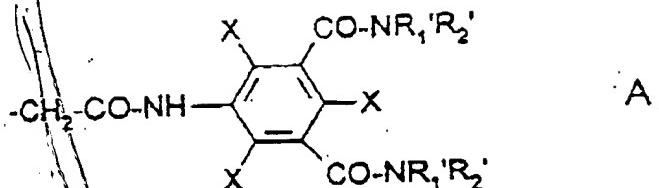
5 in which R is a phenyl group or ( $C_1-C_8$ ) alkyl group which are substituted or interrupted by one or more groups selected from phenyl, alkyl, oxy, amino or amido groups, which may or may not be substituted by alkyl,  
 10 it being possible for the phenyl groups also to be substituted by OH, Br, Cl, I, ( $C_1-C_8$ )alkyl, ( $C_1-C_8$ )alkyleneoxy, NO<sub>2</sub>, NR<sub>x</sub>R<sub>y</sub>, NR<sub>x</sub>COR<sub>y</sub>, CONR<sub>x</sub>R<sub>y</sub> or COOR<sub>x</sub>, R<sub>x</sub> and R<sub>y</sub> being ( $C_1-C_8$ )alkyl or H,  
 15 and it being possible for the linear or branched or cyclic alkyl groups to be hydroxylated, and the salts of this acid with a physiologically acceptable inorganic or organic base.

- 20 2. Contrast agent according to Claim 1, for which R is a group of formula



in which  
 25 X is Br or I, R<sub>1</sub> is H, ( $C_1-C_3$ )alkyl or ( $C_2-C_8$ )mono- or polyhydroxyalkyl and R<sub>2</sub> is ( $C_2-C_8$ )mono- or polyhydroxyalkyl, or else R<sub>1</sub> is H and R<sub>2</sub> is a group

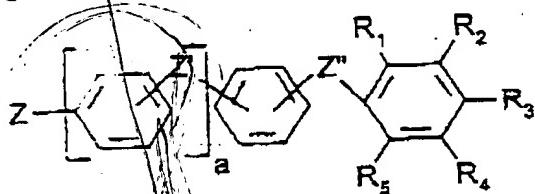
of formula



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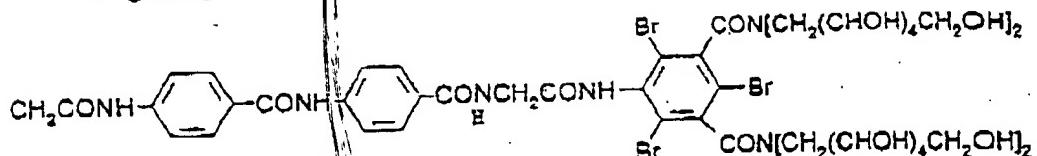
X being as defined above and R<sub>1</sub>' and R<sub>2</sub>' taking any one of the meanings given for R<sub>1</sub> and R<sub>2</sub>, with the exception of A, it being understood that -CO-NR<sub>1</sub>R<sub>2</sub> or -CO-NR<sub>1</sub>'R<sub>2</sub>' comprise at least two hydroxyl groups, and its salts with a physiologically acceptable inorganic or organic base.

- 10 3. Contrast agent according to Claim 1, for which R is a group of formula



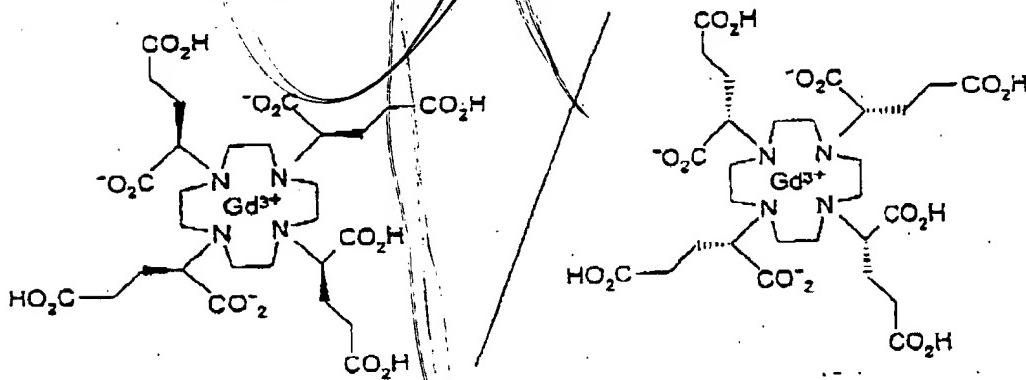
15 in which a is 1 or 2,  
z is a bond, CH<sub>2</sub>, CH<sub>2</sub>CONH or (CH<sub>2</sub>)<sub>2</sub>NHCO,  
z' is a bond, O, S, NQ, CH<sub>2</sub>, CO, CO-NQ, NQ-CO,  
NQ-CO-NQ or CO-NQ-CH<sub>2</sub>-CONQ,  
z'' is CO-NQ, NQ-CO, CO-NQ-CH<sub>2</sub>-CO-NQ or  
NQ-CO-CH<sub>2</sub>-NQ-CO,  
with Q being H or an optionally hydroxylated (C<sub>1</sub>-C<sub>4</sub>)alkyl group,  
20 R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub>, independently of one another, are selected from H, Br, Cl, I, CO-NQ<sub>1</sub>Q<sub>2</sub> or N(Q<sub>1</sub>)-CO-Q<sub>2</sub>, and Q<sub>1</sub> and Q<sub>2</sub>, which are identical or different, are selected from optionally hydroxylated (C<sub>2</sub>-C<sub>6</sub>)alkyl groups optionally interrupted by an oxygen atom, so that Q<sub>1</sub> and Q<sub>2</sub> together comprise from 4 to 10 OH groups,  
25 it being understood that at least 1 and at most 2 R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> groups are amide groups.

4. Contrast agent according to Claim 3, in which R is  
a group of formula



- 5 . 5. Process for the preparation of a racemic compound of formula A as defined in one of Claims 1 to 4, which consists

1 - in keeping an aqueous solution of the mixture  
of the stereoisomers of the gadolinium complex of  
1,4,7,10-tetraazacyclododecane-1,4,7,10-tetra(2-  
glutaric acid), with a pH of between 2 and 4.5, at  
a temperature of greater than 70°C for a few hours  
to a few days, so as to obtain the racemic mixture  
of octaacids of formula:

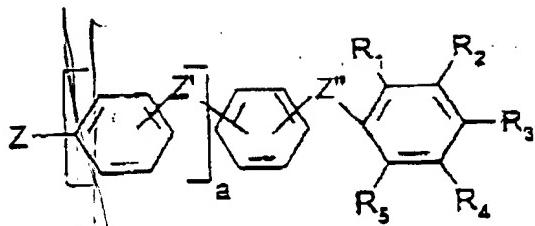


2 - in reacting this mixture with the amine  $\text{RNH}_2$ , R being defined as in Claims 1 to 4, with an agent which activates the acid functional group.

6. Process according to Claim 5, in which the solution of complexed octaacid is maintained at its reflux temperature for 35 to 45 hours at pH 3.

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7. Racemic compound, for which R is a group of formula



in which  $a$  is, 1 or 2.

$z$  is a bond,  $\text{CH}_2$ ,  $\text{CH}_2\text{CONH}$  or  $(\text{CH}_2)_2\text{NHCO}$ .

$\text{O}$ ,  $\text{S}$ ,  $\text{NO}_2$ ,  $\text{CH}_2$ ,  $\text{CO}$ ,  $\text{CO-NQ}$ ,  $\text{NQ-CO}$ ,

5 NQ-CO-NQ or CO-NQ-CH<sub>2</sub>-CONQ,  
Z" is CO-NQ, NQ-CO, CO-NQ-CH<sub>2</sub>-CO-NQ or

$$\text{NQ-CO-CH}_2\text{-NQ-CO}_2$$

with  $\sigma$  being

with Q being H or an optionally hydroxylated ( $C_1-C_4$ ) alkyl group.

10  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$ , independently of one another, are selected from H, Br, Cl, I, CO-NQ<sub>1</sub>Q<sub>2</sub> or N(Q<sub>1</sub>)-CO-O<sub>2</sub>, and Q<sub>1</sub> and Q<sub>2</sub>, which are identical or

15 different, are selected from optionally hydroxylated ( $C_2-C_6$ )alkyl groups optionally interrupted by an oxygen atom, so that  $Q_1$  and  $Q_2$  together comprise from 4 to 10 OH groups.

it being understood that at least 1 and at most 2 R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> groups are amide groups.

20 8. Racemic compound according to Claim 7, in which R  
is a group of formula

